AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

1. (Original) An improved ac generator, said generator comprising:

an output winding having a pair of output terminals;

a center tap terminal located at the point of mean voltage differential between the two output terminals of said output winding, wherein said center tap terminal is grounded;

each of said output terminals of said output winding being connected to an input terminal of said impedance load, wherein said impedance load is grounded.

2. (Original) An improved ac generator as in claim 1, wherein said generator is a three phase generator having three output windings, and each of said output windings of said generator is configured such that a center tap terminal is located at the point of mean voltage differential between each of its two output terminals; each center tap terminal is grounded; and each of said output terminals is connected to an input terminal of a three-phase impedance load.

3. (Original) A method for improving the performance of an electrical system which includes an ac generator power source having an output winding between two output terminals, said system being connected to an impedance load, said method comprising:

configuring said output winding of said generator such that it comprises a center tap terminal located at the point of mean voltage differential between the two output terminals of said output winding;

grounding said center tap terminal;

connecting each of said output terminals of said output winding to an input terminal of said impedance load; and

grounding said ground terminal of said impedance load.

4. (Original) A method as in claim 3, wherein said generator is a three phase generator having three output windings, said method comprising configuring each of said output windings of said generator such that a center tap terminal is located at the point of mean voltage differential between each of its two output terminals;

grounding each said center tap terminal;

connecting each of said output terminals of each said output winding to an input terminal of a three phase impedance load; and

grounding each ground terminal of said impedance load.

5. (New) An AC power conditioning system comprising:

a transformer having

an input winding for receiving an AC input, and

an output winding inductively coupled to the input winding for supplying a balanced AC output to a load, the output winding comprising first and second conductors connected in series and bifilar wound; and

a center tap terminal for coupling to an electrical ground, the center tap terminal further coupled between the first and second conductors.

6. (New) The system of claim 5, wherein the input and output windings of the transformer are wound around a toroidal core.

7. (New) The system of claim 5, further comprising:

a line filter coupled to the output winding of the transformer, the line filter for attenuating EMI and/or RFI noise.

8. (New) The system of claim 5, further comprising:

a shield enclosing the transformer, the shield configured to be grounded.

9. (New) The system of claim 5, wherein the input and output windings have an equal number of turns.

10. (New) The system of claim 5, wherein the impedance of the first conductor is substantially equal to the impedance of the second conductor.

11. (New) The system of claim 5, wherein the input winding is coupled to an AC power supply, the center tap terminal is grounded, and the output terminals are coupled to a grounded load.

12. (New) The system of claim 5, wherein the load is an AC load.

13. (New) An AC power conditioning system comprising:

a transformer having an input winding and a bifilar wound output winding, the input winding for receiving an AC input, and the output winding for supplying a balanced AC output;

a pair of output terminals coupled to the output winding for supplying the balanced AC output therefrom to a load; and

a center tap terminal for coupling to an electrical ground, the center tap terminal further coupled to the output winding of the transformer at a point of mean voltage differential between the output terminals of the output winding.

14. (New) The system of 13, wherein the transformer further includes a toroidal core about which the input and output windings of the transformer are wound.

15. (New) The system of claim 13, further comprising:

a line filter coupled to the output winding of the transformer, the line filter for attenuating EMI and/or RFI noise.

16. (New) The system of claim 13, further comprising:

a shield enclosing the transformer, the shield configured to be grounded.

17. (New) The system of claim 13, wherein the input winding is coupled to an AC power supply, the center tap terminal is grounded, and the output terminals are coupled to a grounded load.

18. (New) The system of claim 13, wherein the load is an AC load.

19. (New) A method for producing a balanced AC power output from an AC power input, the method comprising:

receiving the AC power input in a first winding;

inductively coupling the first winding to a bifilar wound second winding for inducing an electrical current therein, the second winding having a pair of output terminals on which the balanced AC power is presented; and

electrically grounding the second winding at a point of mean voltage differential between the output terminals of the second winding.

20. (New) The method of claim 19, further comprising:

coupling the output terminals of the second winding to a grounded AC load to provide the balanced AC power thereto, the grounded AC load designed to receive unbalanced AC power from a neutral grounded conductor and an ungrounded conductor.

21. (New) The method of claim 20, wherein the output terminals are coupled to the load by a line filter for attenuating EMI and/or RFI noise.

22. (New) The method of claim 19, wherein the first and second windings are inductively coupled at least in part by a toroidal core.

23. (New) A method for installing an isolation transformer to produce a balanced AC power output from an AC power input, the isolation transformer including an input winding and an output winding, the method comprising:

coupling the input winding to the AC power input;

coupling a pair of output terminals of the output winding to a load for providing the balanced AC power output thereto, wherein the output winding is bifilar wound; and

electrically grounding the output winding at a point of mean voltage differential between the output terminals of the output winding.

24. (New) The method of claim 23, further comprising:

coupling a line filter between the output terminals and the load, for attenuating EMI and/or RFI noise.

25. (New) The method of claim 23, wherein the transformer includes a toroidal core about which the input and output windings of the transformer are wound.

26. (New) An AC generator for supplying symmetrical AC power with respect to an electrical ground, the AC generator comprising:

an output winding configured to receive inductive energy;

a pair of output terminals for supplying AC power to a load, the output terminals coupled to the output winding; and

a center tap terminal for coupling to an electrical ground, the center tap terminal further coupled to the output winding between the pair of output terminals so as to substantially equally divide the voltage between the output terminals during operation of the AC generator.

27. (New) The generator of claim 26, wherein the center tap terminal is coupled to an electrical ground, and the output terminals are coupled to a grounded load.

28. (New) The generator of claim 26, wherein the output winding is bifilar wound.

29. (New) The system of claim 26, wherein the center tap terminal is grounded, and the output terminals are coupled to a grounded load.

30. (New) A three-phase AC generator comprising:

three output windings, each output winding configured to receive inductive energy;

a pair of output terminals coupled to each output winding; and

a center tap terminal for coupling to an electrical ground, the center tap terminal further coupled to each output winding between its output terminals so as to substantially equally divide the voltage between the output terminals during operation of the AC generator.

31. (New) The generator of claim 30, wherein each output winding is bifilar wound.

32. (New) The generator of claim 30, wherein the three output windings are 120 degrees out of phase.

33. (New) A method for generating balanced AC power, the method comprising:

inductively driving an output winding of a generator to produce an electrical current therein, the output winding coupled to a pair of output terminals for supplying the balanced AC power;

coupling the output terminals to a load to provide electrical power thereto; and

electrically grounding the output winding at a point of mean voltage differential between the output terminals of the output winding.

34. (New) The method of claim 33, wherein the output winding is bifilar wound.

35. (New) The method of claim 33, further comprising:

coupling a line filter between the output terminals and the load, for attenuating EMI and/or RFI noise.